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## SYNOPSIS OF THE NORTH AMERICAN SPECIES OF HYPOXYLON AND NUMMULARIA.

BY J. B. ELLIS AND BENJA. M. EVERHART.

(Continued from page 93.)

*HYPOXYLON OBESUM, Fr. Nova Symb. p. 129.—On trunks in Costa Rica. *Oersted*. Hard-carbonaceous, bare, black. Stroma slightly exceding the short, very thick stipe, of radiate structure and cinereous-black within. Perithecia immersed, peripheric, bullate-prominent. Ostiola papillate, surrounded by an elevated, orbicular margin. Fries who described this species from a single specimen says it is allied to *H. annulatum*, that it is very hard, an inch high, and, at least when mature, quite bare, glabrous and shining black. The sterile base or stipe is ½ an inch high but ¾ of a line ("¾ lin.") thick†, rugose outside and attenuated below, covered above with a horizontal, slightly convex layer of globose, immersed, monostichous, bullate-prominent perithecia, like an immarginate pileus an inch across. The bullate projections of the perithecia are surrounded with a prominent orbicular margin and in the middle of this circular area emerge the papilliform ostiola. The specimen seen by Fries was old and entirely without spores.

HYPOXYLON ILLITUM, Schw. Syn. N. Am, 1205.—Not infrequent on standing trunks, especially of *Platanus*, investing them almost completely with its broad, uneven, confluent stromata. Bethlehem, Pa. (Schw.) Widely effused, confluent, the layers often superimposed, so as to imitate a sculptured surface, the material of the stroma appearing as if smeared on the decaying wood. Surface undulate and uneven, at first of a fine olive-green, but finally black. Perithecia rather large, slightly prominent, with ostiola

*Accidentally omitted in its proper place next to *H. marginatum*.

†Apparently a mistake for ¾ inch.

indistinct or acutely conic and thick walls, surrounded with a sparing white stroma. Sporidia 14—16 x 4 (Cke. l. c.)

HYPOXYLON CARIES, Schw. Syn. N. Am. 1222.—On rotten oak, Newfield, N. J. (1874), Also on rotten elm (Ulmus Americana), Concordia, Mo., Dec. 1887. Rev. C. H. Demetrio, No. 56. Stroma effused, black within and without, colliculose and uneven from being composed apparently of many smaller stromata 3—10 mm. in diam. fused together laterally more or less perfectly into a continuous or partially interrupted crust irregular in outline and several centimeters in extent. Perithecia subglobose, $\frac{1}{3}$—$\frac{2}{3}$ mm. diam. their apices slightly prominent with a subacute papilliform ostiolum surrounded by an indistinct lighter colored ring which however is not impressed or sunk into the stroma as in *H. annulatum*. In the specimens examined the asci had disappeared. Sporidia navicular-fusoid, (subhyaline) pale smoky-brown, ends subacute, 10—12 x about 3 micr.

HYPOXYLON INVESTIENS, Schw. Syn, N. Am. 1210.—On rotten wood, Carolina and Penna. (Schw.), Alabama (Beaumont in Rav. Fungi Car. IV, 33), Louisiana (Langlois, No. 991) on *Salix*. Seated on a thick sterile crust that spreads over and blackens the wood following all the inequalities of its surface. On this crust stand densely crowded in a single series the regularly oblong perithecia forming a continuous layer about $\frac{3}{4}$ mm. thick and 4—9 cm. long and wide. The stroma is very scanty covering the perithecia with a thin black stratum mammillose above from the slightly projecting perithecia, with their papilliform deciduous ostiola. In the specimens in Rav. Car. as well as in the La. specc. the surface of the stroma has a distinct purplish tinge. We have not seen the asci but the sporidia are oblong, pale brown 6—10 (mostly 6—8) x 3—4. *H. effusum* Nitschke is closely allied to this.

HYPOXYLON RAVENELII, Rehm. Hedwigia, 1882, p. 137.—(H. confluens, Fr. in Rav, F. Am. 348.) On bark of decaying oak, Darien, Ga. Perithecia single or concrescent 2—8 together, occasionally seriate 6—12 in a series 3—6 mm. long, nearly globose $\frac{1}{4}$—1 mm. diam. with their bases slightly sunk in the wood (our spec. is on wood and not on bark), ostiolum distinct papilliform, black and shining. The perithecia are of a dead grayish-black. Asci very long, cylindrical with abundant well developed paraphyses. Sporidia elliptical, obtuse, pale-brown, with 1—2 large nuclei, uniseriate, 10 x 5 micr.

This is entirely different from H. Ravenelii, Sacc. Syll. I, p. 389 (H. erinaceum, B. & Rav.) which (sec. Cke. Grev. XI, p. 128 is a

Valsa with long necked perithecia and hyaline allantoid sporidia. Whether the above described fungus is the *Sphæria confluens*, Tode can not perhaps now be certainly decided. It agrees tolerably with Tode's fig. but it is not that species as understood by Nitschke and described by him (under *Hypoxylon semiimmersum*) as having sporidia 16—20 x 8—10 and by Fckl. (under the name of H. udum) as having sporidia 28 x 10 micr. We have therefore accepted *H. Ravenelii*, Rehm. as a distinct species.

HYPOXYLON? ATROFUSCUM, B. & C.—(*Fuckelia atrofusca*, B. & C. Grev. XII, p. 51.) On bark of *Rhus glabra*, mountains of Virginia. Pustules erumpent, very small (hardly ¼ mm. diam.), elliptical, margined by the ruptured bark. Perithecia unequally distributed in the black, depressed stroma. Asci cylindrical, stipitate. Sporidia elliptical, brown, 13 x 7 micr.

The following species are placed by Cooke (in Grev. XI, 139) under the head of *Doubtful* and as we have no knowledge of them we leave them there:

H. glomus, B. & C.
" exaratum, Schw.
" Sphæriostomum, Schw.
" hydnicolum, Schw.

H. affiatum Schw. is said by the same author to be allied to *Diatrype stigma*, with hyaline sporidia.

*HYPOXYLON Bull. (p. p.)—Stroma carbonaceous, subhemispherical or more or less effused, convex or plane, at first clothed with a conidial growth (mostly some shade of red or yellow), finally bare and black. Perithecia peripheric, mostly in a single layer, more or less immersed in the stroma. Asci cylindrical, with paraphyses. Sporidia mostly uniseriate, subovoid, dark-colored, continuous.

DALDINIA, De Not. et Ces.—Stroma superficial, subglobose, external layer carbonaceous, becoming black, fibrous within and concentrically zoned. Asci cylindrical, 8-spored, pedicellate. Sporidia ovoid or oblong, dark colored, Perithecia immersed in the stroma.

DALDINIA CONCENTRICA, (Bolt.)—*Sphæria concentrica*, Bolt. Fungi Hal. tab. 180.—On dead trunks of various deciduous trees. Common from New England to California and from Canada to Louisiana.

Stroma subspherical or hemispherical, rarely obovoid, subferruginous and softer at first, at length black and carbonaceous,

*The generic characters were accidentally omitted at the beginning of this synopsis and are given here.

2—4 cm. diam. Softer inside, of a radiate-fibrous structure and concentrically zoned. Perithecia monostichous, obovoid-oblong, 1 mm. or a little more in length and about ½ mm. broad, more or less angular from mutual pressure. Ostiola slightly prominent, punctiform, minute. Sporidia obliquely uniseriate, inequilaterally-elliptical, dark brown and finally opake, 12—15 x 7—10. Asci long-pedicellate, 80—100 x 8—10 (p. sp.), with long, filiform paraphyses.

DALDINIA VERNICOSA, (Schw.)—*Sphæria vernicosa*, Schw. Syn. N. Am. 1175. Stroma large (2½—3 x 1—1½ cm.), subturbinate, suddenly contracted below into a thick, stipe-like base which is sometimes concentrically wrinkled, surface of the stroma ferruginous at first from the conidial layer, finally black and shining. Perithecia peripheric, subglobose (sec. Schw.) but in all the specimens we have seen, ovoid-oblong about the same in size and shape as in the preceding species. Saccardo in Sylloge says perithecia polystichous but Schweinitz does not say so nor have we ever found them so though a vertical section through one side of the stroma shows them *apparently* so but this is only apparent as may be seen in a vertical section through the center of the stroma. We find the asci and sporidia about as in the preceding species though in the Sylloge they are said to be longer and narrower. This is a common species around Newfield and we have also received it from New England and New York. This is distinguished from *D. concentrica* by its shining black stroma and the looser texture of the radiate-fibrous inner substance which is cut by 8—12 dark colored, membranaceous horizontal layers or plants. These are very noticeable in a vertical section even in the young plant while it is still covered with the conidial layer and before the terminal. subglobose, ascigerous stroma has begun to appear. In the mature state, the fibrous inner substance and the horizontal membranes disappear to a greater or less extent and leave the stroma more or less hollow so that it may be easily crushed with the fingers, but in *D. concentrica* the inner substance remains firm and is also of a darker color.

"DALDINIA CINGULATA, (Lev.) Sacc.—*Sphæria cingulata*, Lev. Ann. Sci. Nat. 3, 1845, p. 47. Obovata, erecta, substipitata, crustaceo-laccata, e fusco-nigra nitida, cingulis peritheciis notata; peritheciis interioribus demum albis, stromate immersis, ostiolis obsoletis.

Hab. ad truncos prope New York (MENAUD).

Stroma 1—2 dec. alt., 1 dec. crass."

The foregoing description of this species is copied from Sacc.

Syll. I, p. 395. We do not get a clear idea of what is meant by "cingulis peritheciis," but suspect that *D. cinglata (Lev.)* is the same as *D. vernicosa*. There is nothing in Leveille's description to distinguish this from *Sphæria vernicosa, Schw.*

DALDINIA LOCULATA, (Lev.)—*Sphæria loculata, Lev.* l. c.—Globosa, substipitata, atra, opaca; peritheciis obovatis stromate nigro immersis, ostiolis prominulis, nitidis, subhemisphericis; ascis sporidiisque generis. Hab. in America, ad truncos. Stipes brevis asperulus. This too is copied from the Sylloge and is all we know about it.

USTULINA, Tul. Sel. Carp. II. p. 23.—Stroma superficial, subeffused, rather thick., determinate, at first carnose-suberose and clothed with the pulverulent, cinereous conidial hymenium, finally rigid, carbonaceous, black and bare and generally more or less hollow. Perithecia immersed, large, with papilliform ostiola. Asci pedicellate, 8-spored, paraphysate. Sporidia ovoid-fusiform, continuous, dark colored.

USTULINA VULGARIS, Tul. l. c. *Sphæria deusta. Hoff.* Veg. Crypt. I. p. 3. *Sphæria verspellis.* Tode. Meckl. II p. 55. On roots of decaying stumps. Found in Europe, America and Australia. Common throughout the eastern U. S. and reported by Dr. Harkness from California. Stroma superficial, subeffused, 3 cm. diam. repand pulvinate, thick (3—4 mm.), surface even, white and subtomentose finally undulate-colliculose and black, substance almost gelatinous at first, then hard and tough almost like *Daedalea betulina*, at length very brittle and hollow, centrally attached. Perithecia large, ovate, densely crowded, monostichous, the punctiform ostiola alone projectiong. Asci narrow-cylindrical, pedicellate, 8-spored, 250 x 8—10 (p. sp.); paraphyses slender, evanescent. Sporidia obliquely uniseriate, fusoid, inequilateral or slightly curved, finally opake, 32—40 x 8—10. Tode (l. c.) gives a very minute and accurate account of this fungus.

## NEW SPECIES OF FUNGI FROM VARIOUS LOCALITIES.

BY J. B. ELLIS AND BENJA. M. EVERHART.

(Continued from page 107.)

CHLORIDIUM GLAUCUM, E & E.—On decaying oak limb. Newfield, N. J., July 30, '88. Effused, glaucous-gray, becoming olive-brown. Hyphae subfasciculate, with spreading tips, 75—100 x 2½—3, faintly septate, simply or sparingly branched, crooked

and paler and minutely spiculiferous-dentate above, bearing terminally and laterally the minute (3—8½ x 2), continuous, hyaline, obovate or elliptical, solitary conidia. The minute tufts of hyphae are so thickly scattered as to resemble a short velvety pubescence, much like *Menispora glauconigra C. & E.*

NAPICLADIUM ASTRAGALI, E. & E.—On living leaves of *Astragalus Chamaeleuce*, Gray, Helena, Montana, June 9. '88. F. W. Anderson, No. 60. Leg. Rev. F. D. Kelsey.—Amphigenous forming sooty-black, subconfluent tufts, thickly scattered over the leaves. Hyphae fasciculate on a cellular, subtubercular base, 50—75 x 5—6, smoky brown, septate, simple, nearly straight. Conidia, oblong—cylindrical, 1—4—septate, smoky, 15—40 x 11—13, ends obtuse.

DENDRYPHIUM NUBILOSUM, E. & E.—On living and dead stems and leaves of *Astragalus flexuosus, Dougl.* Sand Coulee, Montana, July, Anderson 117. Hyphae erect, pale fuliginous, subundulate, mostly simple, 80—100 x 6—7, forming a thin velutinous black coat on the matrix. Conidia terminal, not distinctly concatenate, oblong-elliptical to oblong or cylindric-oblong, pale fuliginous, mostly a little curved, 2—5—septate, 25—60 x 10—12. Differs from *D. curtum*, B. & Br. in its paler color (under the micr.) and broader conidia not constricted at the septa.

DENDRYPHIUM ACINORUM, E. &. E.—On dried up grapes still hanging on the vines, Newfield, N. J., Oct., '88. Olive black effused, hyphae erect, simple, septate olivaceous, 150—200 x 4—5, bearing the terminal, obclavate, 5—7—septate, smoky—brown, 40—60 x 6—7 conidia either solitary or 2—3—concatenate at their tips.

DENDRYPHIUM CLADOSPORIOIDES, E. & E.—On dead stems of tomato, Langlois No. 1333. Investing the stems with an olivaceous-black, tomentose coat much resembling in color and general appearance *Helminthosporium, interseminatum, B. & Rav.* Fertile hyphae erect brown, septate, 200—250 x 6—7 more or less branched above bearing the pale-brown, continuous or 1—2—septate, oblong 3—4—catenulate, 12—15 x 5, terminal conidia.

HELMINTHOSPORIUM SUBCUTICULARE, E. & E.—F. W. Anderson, No. 169. On dead twig of *Negundo aceroides*, Sand Coulee, Montana, Apr. '88, Tufted at first then interruptedly confluent and throwing off the cuticle, black. Hyphae simple, erect, hyaline becoming olivaceous, 20—25 x 4—5. Conidia terminal, solitary, olivaceous, oblong—cylindrical, 2-septate, 25—35 x 15—18.

CERCOSPORA MALLOTI, E. & E.—On *Mallotus Japonicus*,

Starkville, Miss., Sept. '88. (Tracy, 83.) Spots dirty-white, subangular, 1—4 mm. thin, deciduous. Hyphæ Amphigenous, tufted, 35 x 3—4, browish, continuous. denticulate, crooked. Conidia slender, 60—70 x 3, faintly septate, hyaline.

CERCOSPORA NUBILOSA, E. & E.—On leaves of *Smilax*, Cleveland, Ohio, July, '88, Tracy No. 68. Spots suborbicular, ¼—1 cm. diam. smoky-brown, appearing as if the leaf had been stained with pale-black ink, margin definite but without any border. Hyphæ hypophyllous, in minute punctiform tufts, short (15—25 x 2), brownish, arising from a subtubercular base. Conidia cylindrical 2-6-septate, subhyaline obtuse at each end, 40—90 x 3½—5. Very different from *C. Smilacis*, Thum.

CERCOSPORA TUBERCULANS, E. & E.—On leaves of *Liquidambar styraciflua*, Starkville, Miss., June, '88. Prof. S. M. Tracy. Forming rounded tubercles about 1 mm. diam. appearing first along the midrib and main nerves towards the tip of the leaf on the underside and soon spreading over and killing the entire leaf. These tubercles are of a light color inside but are thickly clothed on the surface with short, 25—35 x 4—5, continuous, erect olivaceous hyphæ which are entire or slightly toothed above and bear the subolivaceous subcylindrical, 1-5-septate conidia 30—75 x 4—5. This is very different from *Cercospora Liquidambaris, C. & E.*, which is on definite spots.

CERCOSPORA PENICILLUS, E. & E.—On leaves of *Myrica cerifera* still hanging on the branches or lately fallen., Newfield, N. J. June, '88. Hyphae hypophyllous in compact and distinct fascicles forming little black brush-like tufts scattered on brick colored spots. The hyphae under the microscope are of a smoky olive-black color, (paler above), multiseptate, 150—200 x 4—6, more or less bent above. Conidia narrow-obclavate, hyaline, nucleate becoming 3-5-septate, 50—75 x 3½—4. This is found associated with *Gnomonia Myricae E. & E.*, of which it is not improbably the conidial stage. On the same leaves also occurs the following species.

CERCOSPORA DISPERSA, E. & E.—Hyphae effused, standing singly or 2—3 together, olive-brown, multiseptate, about 150 x 4—5, nearly straight, subdentate at the apex, forming indefinite olivaceous patches scattered over the lower surface of the leaf. Conidia slender above, smoky hyaline, mostly a little curved. 3-5-septate 80—110 x 3½. Differs from the preceding principally in its effused mode of growth. The color also is not as dark. Has the general appearance of *C. sordida*, Sacc.

CERCOSPORA TEXENSIS, Ell. & Galloway.—On leaves of *Fraxinus viridis*, Brazos Co., Texas, coll. by Prof. LeBrunk, com. B. T. Galloway. Spots amphigenous, small (1—2 mm.), whitish with a purplish border, abundant. Hyphae amphigenous, loosely fasciculate, 5—20 in a tuft, spreading, brown, continuous or faintly 2-3-septate, subequal, nearly straight, shouldered and denticulate above, subtruncate at the apex, 35—50 x 4. Conidia slender about 2½ micr. thick at the base, narrowed and almost filiform above, faintly septate, 70—110 micr. long. On some of the leaves were larger (½—1 cm.), irregular, brown spots also bearing the fungus. These larger spots were marginal or near the margin. This differs from *C. fraxinites*, E. & E. in its longer, coarser and more spreading and fewer hyphae and its much longer conidia and also in the different character of the spots.

CERCOSPORA MALI, E. & E.—On living leaves of *Pyrus malus*. St. Martinsville, La., July, 1888, Rev. A. B. Langlois, 1373. Epiphyllous on gray round spots 2—3 mm. across with a dull red border. Hyphae short, brown, continuous, shouldered and toothed above, 15—20 x 2½—3 densely tufted, appearing like minute black specks on the gray surface of the spot. Conidia slender nearly straight, yellowish-hyaline, 4-5-septate 60—70 x 2—2½. Quite distinct from *C. Pyri Farlow* which is hypophyllous and much coarser.

STILBUM SEBACEUM, E. & E.—Parasitic on old *Stereum Spadiceum*, Newfield, N. J., June '88. White, gregarious, short (½mm.), Stem 40—50 thick, of loose fibrous texture, white tomentose pubescent. Head obovate or subglobose, 150—200 diam. white, then flesh-colored, composed of much branched sporophores bearing at their tips the subglobose or slightly elliptical conidia, 4—5 micr. diam. hyaline, mostly with a single nucleus. These conidia form a conglutinated mass mostly flattened above and by its weight often bending down the stem so as to appear sessile, or often 2 or 3 heads of conidia are confluent forming a flesh colored mass 1 mm. diam. and much resembling the conglutinated masses of spores discharged by some species of *Glœosporium*. There was also a *Penicillium* (P. Hypomycetis Sacc.) on most of the specimens.

STILLBUM COPROGENUM, E. & E.—On dung of some animal (Raccoon)? in swampy woods. Newfield, N. J., Sept. 1887. Stem 5—6 mm. high and ¼—⅓ mm. thick, quite tough, reddish-brown below, lighter above, subequal. Head yellowish white, clavate, 1½ mm. long, dusted over with the short elliptical or

subglobose, subhyaline conidia which are 3—3½ in the longer diameter.

ISARIA STRAMINIPES, E. & E.—On decaying twigs lying on damp shady ground. St. Martinsville, La., May, '88. Rev. A. B. Langlois, No· 1230. Stromata simple, clavate, tomentose-farinose head obtuse and about 1 mm. thick. Conidia abundant, obovate, hyaline 2—2½ x 1. There is at first a small patch of bright yellow subiculum at the base of the stem but the yellow color of this subiculum as well as of the stem itself changes to a tobacco brown. This possibly is not distinct from *I. clavata*, Desm, which is said to be of a "reddish-yellow color inclining to umber brown" with "sporidia" of the same color. Saccardo describes and figures the Italian specimens as *white*. The La. specimens have the stem bright yellow (at first) and only the club-shaped head white.

DENDRODOCHIUM DENSIPES. Sacc. & Ell.—On bark of dead cedar, Faulkland, Del. A. Commons 639. Sporodochia seriate-erumpent, globose. minute then applanate-pulvinate, suborbicular with partially free margin and 1 mm. or more diam. pale-orange, subconfluent. Sporophores fasciculately branched, branches erect, 20—35 x 1½. Conidia terminal, ovate-elliptical, hyaline, about 5 x 2½. Longitudinally seriate in cracks of the bark.

VAR. PROLIFICUM, E. & E.—On bark of *Salix*, Louisiana, Langlois 1454, has the conidia a little smaller, (5—6 x 2½) with their ends subacute and basidia evanescent.

DENDRODOCHIUM SIMILE, E. & E.—On bark of dead Carya olivaeformis. Louisiana Langlois No. 1398, Sporodochia seriate-erumpent, pale orange, whitish pulverulent, ½—1 mm. diam. or by confluence 2—3 mm. Sporophores erect, branched, the branches closely appressed. Conidia oblong, 2—2½ x ½—¾. Has the same structure as D. densipes, S. & E. from which it differs in its smaller conidia.

SEPTORIA ATRIPLICIS, (*Desm.*) AND SEPTORIA CHENOPODII, *West.*—In examining some leaves of *Blitum capitatum*, sent by Mr. Holway, collected by Mr. J. M. Holzinger at Winona, Minn. and infested by a fungus which is either the same as or closely allied to *Phleospora Chenopodii*, E. & K. (J. M. iv, p. 26), a careful examination was made of all the specimens of *Septoria Atriplicis* (*Desm.*) & S. *Chenopodii*, *West*, in the different Exsiccati at my command to ascertain more definitely, if possible, whether the fungus collected by Mr. Holzinger, and the *Phleospora Chenopodii*, E. & K. were really distinct from the species of Westendorp and Desmazieres. Of *Septoria Atriplicis*, (Desm), Fuckel in his Symb. Myc. p, 390, says the sporules are "oblong, obtuse at each

end, uniseptate and hyaline." The specimens of this species in Saccardo's Mycotheca Veneta 1227 on Chenopodium murale have the sporules 15—20 x 3—4, continuous or 1-septate. Those in Myc. Mar. 387, on *Atriplex* (sp.), have sporules 15—22 x 4—5, 1—3-septate, the larger ones slightly constricted at the septa. Those in Eriksson's Fungi Scan. 188. on *Atriplex hastata* have sporules 15—22 x 3½—4½ and mostly 1-septate. Specimens of *Septoria Chenopodii, West*, from de Thumen, on Chenopodium *murale* have the sporules continuous, 20—25 x 3—3½. In Mycotheca Marchica 1570 (on *C. rubrum*), the sporules are partly 1-septate. and 15—25 x 3—3½ and partly larger 15— 22 x 3—4, 1—3-septate. All the specimens above mentioned have the same general appearance and can not be distinguished by their external character; nor do their sporules differ sufficiently to warrant specific distinction, being mostly continuous or uniseptate in perithecia on the smaller and paler spots, on leaves still green, and larger and 1—3-septate on spots apparently older, on leaves nearly dead. In the original specimens of *Phleospora Chenopodii* E. & K. on leaves of *Chenopodium* from Kansas, the spots are concentrically wrinkled and have a definite, slightly raised border, in which respect as well as in the much thicker (7—11 micr.) sporules strongly constricted at the septa they differ from the specimens of *Septoria Atriplicis* and *S. Chenopodii*, though considering the variability in the sporules of these two so called species, there may be good reason to doubt whether *Ph. Chenopodii*, is more than a var. or a more perfectly developed form of *S. Atriplicis*, (Desm.). In the 40th Rep. N. Y. State Mus, Nat. Hist. is a *Stagonospora Chenopodii*, Pk. which was published at about the same time as the last mentioned species but if the genus *Phleospora* is to be retained it will evidently include Peck's species which, unless it can claim priority (which is doubtful), will become a synonym of *Phleospora Chenopodii*, E. & K. The Minnesota specimens differ from the Kansas specimens of *Phl. Chenopodii* only in the less definitely margined spots without any concentric wrinkles. This variability would seem to strengthen the supposition that all the forms here enumerated may be referable to *Septoria* (*Phyllosticta*) *Atriplicis, Desm.* It should also have been noted that the specimens in N. A. F. 1168, labelled "*Phyllosticta Chenopodii, West*," and having sporules 12—16 x 3—4, some of them faintly uniseptate are evidently only an imperfectly developed state of *Septoria Atriplicis, Desm.* J. B. E.

## NEW LITERATURE.

Lichenes Paraguenses a cl. Balansa lecti et a Prof. Dr. Muller elaborati. Revue Mycologique, Oct. '88.

La Melanose, par MM. P. Viala et L. Ravaz l. c.

Le remede du Black-Rot decouvert par M. Ed. Prillieux. l. c.

L'-organisation du White Rot (Rot Blanc), par MM. G. Foex et L. Ravaz. l. c.

Le Rot-Blanc dans la Haute. Garonne et le Tarn en '88 C. R. l.c.

Champignons parasites nouveaux des Plantes cultvees, par M. Fridiana Cavara. l. c.

Les nonveaux Champignons de la vigne, par M. F. Carvara. l.c.

Forme abnormal du *Polyporus obducens*, A. Le Breton, l. c.

Cooke, M. C. Illustrations of British Fungi parts LXIV. and LXV.

Cooke. M. C. Mutinus Bambusinus in Britain with plate Grevillea Sept. '88.

British Hyphomycetes (concluded). l. c.

Cook, M. C. Berkeley & Curtis Types. l. c.

Massee. G. British Pyrenomycetes (continued), l. c.

Cooke, M. C. New British Fungi. l. c.

Masse. G. A Monograph of the genus Lycoperdon (Tourn.) Fr. Journal of the Royal Microscopical Society, June, '87. (plates 12 and 13.

## CORRECTION.

On p. 86 (vol. iv.) 7th line from the bottom for "10 x 15 micr." read 8—11 x 4--5 micr.

## NOTICE.

The Herbarium of the late Dr. H. W. Ravenel, containing about 10,000 specimens of PHÆNOGAMS and CRYPTOGAMS is now offered for sale. The collection is a very valuable one and will be a rich acquisition to the individual or Institution fortunate enough to secure it. Address, MRS. H. W. RAVENEL,
Aiken, S. Ca.

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